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853 The Great American Smokeout — November 19, 1992
854 Cigarette Smoking Among Southeast Asian Immigrants — Washington State, 1989
861 Cigarette Smoking Among American Indians and Alaskan Natives — Behavioral Risk Factor Surveillance System, 1987–1991

The Great American Smokeout — November 19, 1992

Since 1977, the American Cancer Society (ACS) has sponsored the Great American Smokeout to foster community-based activities that encourage cigarette and smokeless-tobacco users to stop using tobacco products for at least 24 hours. Local activities for the Great American Smokeout include distributing anti-tobacco–use materials to interested schools, hospitals, businesses, and other organizations; encouraging retail businesses not to sell tobacco products and restaurants and other businesses to be smoke-free for the day; and providing media coverage of prominent local citizens who have pledged to stop smoking for the day.

During 1991, 83% of adults in the United States knew of the Great American Smokeout, an increase of approximately 2% from 1990 (*1*). Approximately one third of U.S. smokers participated in this national campaign: 7.1 million (14.2%) smokers reported quitting for the day, and 10.6 million (21.3%) reported reducing the number of cigarettes consumed on that day (*1*). In addition, approximately 1 million more smokers reported quitting smoking for 1–3 days after the Smokeout in 1991 than did in 1990 (*1*). Although fewer black and Hispanic smokers knew of the Smokeout, an estimated 25% of those who did know participated, and 14% of black and Hispanic smokers who participated reported that they were not smoking 1–3 days after the Smokeout (*1*).

This year, the Great American Smokeout will be on Thursday, November 19. This year's objective is for 25% of smokers to give up smoking for the 24-hour period. The goal of the Smokeout is to encourage cessation and, by doing so, to help smokers to realize that if they can quit for 24 hours, they can quit permanently. Information is available from local chapters of the ACS; telephone numbers of these local chapters are available by telephoning (800) 227-2345.

Reported by: American Cancer Society, Atlanta. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Reference

1. Lieberman Research Inc. A study of the impact of the 1991 Great American Smokeout: summary, Gallup Organization. New York: American Cancer Society, 1991.

Topics in Minority Health

Cigarette Smoking Among Southeast Asian Immigrants — Washington State, 1989

Since 1975, approximately one million Southeast Asians have immigrated to the United States (*1*). In general, the efforts of local public health agencies to meet the needs of these immigrants have focused on identifying and treating acute and chronic diseases rather than identifying and modifying health-risk behaviors (e.g., smoking) among these immigrants (*2–4*). However, efforts to determine the prevalence of smoking suggest that smoking rates are high, especially among men of Southeast Asian origin (*5–7*). During 1989, to characterize cigarette smoking among Southeast Asian immigrants, the Seattle-King County (Washington) Health Department surveyed newly arriving Southeast Asian immigrants who intended to reside in the county regarding their health problems and health-risk behaviors. This report summarizes survey findings regarding their smoking habits.

Washington has the third largest population of Southeast Asian immigrants (an estimated 50,000) in the United States; approximately 32,000 reside in Seattle-King County (B. Duong, Division of Refugee Assistance, Washington State Department of Social and Health Services, personal communication, 1992). Each year since 1982, approximately 1000 persons immigrating to the United States from Vietnam, Cambodia, and Laos have received medical screening interviews and examinations at Seattle-King County Department of Public Health clinics. During 1989, Southeast Asian immigrants were interviewed in their native language by trained interpreters at the Seattle-King County Central Clinic (one of two county public health clinics). Persons aged ≥18 years were asked if they were current smokers (i.e., "Do you smoke now?"), and smokers were asked how many cigarettes they smoked per day. A convenience sample of medical interview records were analyzed for 274 Vietnamese, 147 Laotian, and 112 Cambodian immigrants. Of the 533 records analyzed, 280 (52.5%) were for women.

The overall prevalence of smoking (23.1%) differed substantially by sex and age (Table 1). Men (42.5%) were more likely than women (5.7%) to smoke, and prevalence of smoking was higher for men aged ≥30 years (54.6%) than for men aged 18–29 years (29.5%). Among men, prevalence of smoking was highest for Laotians (51.2%), followed by Vietnamese (41.7%) and Cambodians (32.8%) (Table 2).

Reported by: FJ Frost, PhD, K Tollestrup, PhD, Lovelace Medical Foundation, Albuquerque. D Vu, Fred Hutchinson Cancer Research Center, Minority High School Apprentice Program; ER Alexander, MD, J Riess, Seattle-King County Dept of Public Health, Seattle; Washington State Center for Health Statistics, JM Kobayashi, MD, State Epidemiologist, Washington Dept of Health. Epidemiology Br, Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: In Washington during 1988, the overall prevalence of smoking for men was 25.5%; therefore, the findings in this report suggest that, in 1989, Southeast Asian male immigrants were 1.6 times more likely to smoke than were men statewide. In comparison, the prevalence of smoking among Southeast Asian female immigrants during 1989 was one fourth that among all women in Washington (*8*). Previous reports also have documented a high prevalence of smoking among Southeast Asian male immigrants, especially Vietnamese (*6–7*), and low rates of smoking among Southeast Asian female immigrants (*7*).

For at least two reasons, the findings in this report may underestimate actual smoking prevalence among Southeast Asian immigrants arriving in Seattle. First, during the immigration health screening interviews, respondents and their family members often

Southeast Asian Immigrants — Continued

discussed how to answer questions, including those about smoking. Several respondents were advised by family members to deny that they smoked because of concern about criticism or penalties (D. Vu, Fred Hutchinson Cancer Research Center, personal observation, 1989). Second, the results regarding the number of cigarettes these immigrants smoked per day were unreliably recorded and interviewers did not repeat questions regarding smoking habits. In addition, although these results were stratified by country of origin, the findings reported represent a small convenience sample of newly arriving immigrants screened at one health clinic and, therefore, may not be generalizable to newly arriving Vietnamese, Laotian, and Cambodian immigrants elsewhere or to the existing Southeast Asian immigrant population in the United States.

Educational efforts to reduce smoking in the overall U.S. population may not be as effective for recently-arrived immigrants because of differences in language and culture; in particular, many immigrants may neither understand nor believe health risks are associated with smoking (*7*). To develop culturally appropriate smoking-prevention and smoking-cessation programs in Washington and other locations, the knowledges, attitudes, and behaviors of Southeast Asian immigrants concerning smoking require further characterization (*9*). In addition, educational materials must be tailored to the cultural background of these immigrants, available in their native languages, and evaluated for effectiveness. Finally, prevalence of smoking in these and other immigrant populations should be monitored through public health surveillance efforts to determine whether smoking rates change in relation to years of residence in the United States.

References

1. Lin-Fu JS. Population characteristics and health care needs of Asian Pacific Americans. Public Health Rep 1988;103:18–27.
2. Nolan CM, Elarth AM. Tuberculosis in a cohort of Southeast Asian refugees: a five-year surveillance study. Am Rev Respir Dis 1988;137:805–9.

(continued on page 861)

TABLE 1. Prevalence of smoking among Southeast Asian immigrants, by sex and age — Washington State, 1989*

Age group (yrs)	Men			Women			Total		
	No.	(%)	(95% CI†)	No.	(%)	(95% CI)	No.	(%)	(95% CI)
18–29	36	(29.5)	(22.2–39.7)	3	(3.0)	(0.6– 8.3)	39	(17.6)	(12.6–22.6)
30–39	22	(53.7)	(37.4–69.3)	3	(5.6)	(1.2–15.7)	25	(26.3)	(18.8–37.5)
40–59	30	(54.5)	(40.6–68.1)	7	(8.3)	(3.3–15.8)	37	(26.6)	(19.8–35.2)
≥60	19	(55.9)	(37.9–72.8)	3	(7.1)	(1.5–19.1)	22	(28.9)	(19.3–40.6)
Total	**107**	**(42.5)**	**(36.2–49.2)**	**16**	**(5.7)**	**(3.8–10.4)**	**123**	**(23.1)**	**(19.5–26.7)**

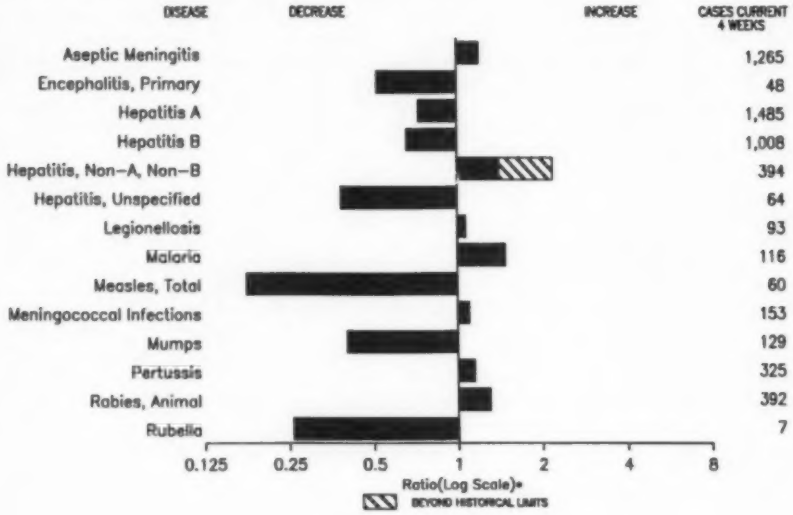
*n=533.
†Confidence interval.

TABLE 2. Prevalence of smoking among Southeast Asian male immigrants, by age and country of origin — Washington State, 1989*

Age group (yrs)	Cambodian			Laotian			Vietnamese		
	No.	(%)	(95% CI†)	No.	(%)	(95% CI)	No.	(%)	(95% CI)
18–29	3	(13.0)	(2.8–33.0)	11	(33.3)	(18.0–51.9)	22	(33.3)	(21.9–45.4)
≥30	16	(45.7)	(28.8–63.4)	25	(65.9)	(43.3–75.1)	28	(51.9)	(37.8–65.7)
Total	**19**	**(32.8)**	**(20.7–45.6)**	**38**	**(51.2)**	**(41.1–64.9)**	**50**	**(41.7)**	**(33.0–51.3)**

*n=253.
†Confidence interval.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 7, 1992, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 7, 1992 (45th Week)

	Cum. 1992		Cum. 1992
AIDS*	39,229	Measles: imported	120
Anthrax	1	indigenous	2,028
Botulism: Foodborne	18	Plague	11
Infant	45	Poliomyelitis, Paralytic†	-
Other	1	Psittacosis	79
Brucellosis	77	Rabies, human	-
Cholera	97	Syphilis, primary & secondary	29,072
Congenital rubella syndrome	8	Syphilis, congenital, age < 1 year§	1,639
Diphtheria	4	Tetanus	28
Encephalitis, post-infectious	181	Toxic shock syndrome	201
Gonorrhea	416,877	Trichinosis	23
Haemophilus influenzae (invasive disease)	1,120	Tuberculosis	19,203
Hansen Disease	130	Tularemia	148
Leptospirosis	39	Typhoid fever	337
Lyme Disease	6,682	Typhus fever, tickborne (RMSF)	423

*Updated monthly; last update October 31, 1992.
†Four cases of suspected poliomyelitis have been reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed, and 5 of the 8 suspected cases with onset in 1990 were confirmed; all were vaccine associated.
§Reports through second quarter 1992.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending November 7, 1992, and November 9, 1991 (45th Week)

Reporting Area	AIDS*	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992
UNITED STATES	39,229	9,523	577	101	416,877	520,608	17,699	12,804	5,010	624	1,105	6,682
NEW ENGLAND	1,447	349	24	-	8,729	12,520	516	438	90	21	45	1,467
Maine	44	37	3	-	76	147	28	19	6	-	2	5
N.H.	36	26	3	-	92	174	31	32	20	1	7	36
Vt.	23	21	5	-	23	49	12	12	11	-	2	6
Mass.	722	153	10	-	3,183	5,371	252	344	47	20	24	212
R.I.	84	112	3	-	589	1,080	133	18	6	-	10	265
Conn.	538	-	-	-	4,766	5,699	60	13	-	-	-	943
MID. ATLANTIC	10,273	781	24	7	42,839	61,649	1,375	1,698	306	23	299	3,846
Upstate N.Y.	1,304	401	-	-	9,279	11,107	292	431	184	13	109	2,272
N.Y. City	6,024	131	5	1	17,193	23,972	623	322	5	-	7	19
N.J.	1,805	-	-	-	1,523	10,025	225	442	87	-	34	565
Pa.	1,140	249	19	6	14,844	16,545	235	503	30	10	149	990
E.N. CENTRAL	3,477	1,595	145	29	80,666	98,294	2,365	1,501	647	23	286	125
Ohio	659	419	48	2	24,198	30,441	384	204	78	4	138	56
Ind.	342	203	10	12	7,941	9,830	649	174	25	2	26	19
Ill.	1,662	447	62	6	26,710	28,426	525	254	84	6	25	23
Mich.	623	494	22	9	18,402	23,047	131	509	388	11	66	27
Wis.	191	32	3	-	3,415	6,550	676	360	72	-	31	-
W.N. CENTRAL	1,110	522	37	6	21,280	25,728	2,356	579	248	34	70	305
Minn.	188	75	15	-	2,602	2,865	650	66	20	2	6	149
Iowa	78	87	-	3	1,349	1,714	51	31	5	5	17	27
Mo.	613	223	8	-	12,923	15,660	986	388	191	25	25	101
N. Dak.	8	1	3	-	52	73	107	1	4	1	2	1
S. Dak.	8	9	2	1	153	317	200	5	-	-	-	1
Nebr.	52	28	4	2	8	1,524	237	35	15	1	15	9
Kans.	163	99	5	-	4,193	3,775	125	55	13	-	5	17
S. ATLANTIC	8,887	1,525	148	45	126,058	153,383	1,131	2,191	823	112	170	564
Del.	112	52	6	-	1,549	2,528	51	186	172	1	23	194
Md.	1,115	187	13	-	14,010	17,331	203	341	32	9	32	150
D.C.	621	26	1	-	5,631	7,954	14	73	278	-	16	2
Va.	541	263	31	12	13,653	15,941	103	160	31	47	19	105
W. Va.	44	37	58	-	736	1,113	7	46	2	24	-	12
N.C.	590	187	25	-	21,601	31,125	101	371	79	-	34	69
S.C.	259	23	-	-	9,398	12,703	21	47	1	1	18	2
Ga.	1,144	191	2	-	35,009	33,683	163	257	102	-	7	3
Fla.	4,261	559	2	33	24,471	31,005	468	710	126	30	23	27
E.S. CENTRAL	1,204	465	21	-	42,932	53,135	290	1,149	1,216	2	54	59
Ky.	187	169	13	-	4,105	5,217	97	83	4	-	25	22
Tenn.	386	107	4	-	13,651	18,081	113	946	1,196	-	23	28
Ala.	418	119	3	-	14,793	17,423	46	116	15	1	6	9
Miss.	215	70	1	-	10,383	12,414	34	4	1	1	-	-
W.S. CENTRAL	3,753	1,072	57	5	45,818	58,462	1,741	1,624	145	144	21	107
Ark.	244	14	7	-	6,173	6,746	118	78	7	4	1	16
La.	633	63	8	1	12,567	13,574	190	155	76	3	4	5
Okla.	219	-	3	2	4,791	6,110	168	169	37	5	9	25
Tex.	2,657	995	39	2	22,287	32,032	1,265	1,222	25	132	7	61
MOUNTAIN	1,140	350	27	5	10,620	10,860	2,547	639	252	55	82	16
Mont.	18	11	1	1	102	85	82	32	27	1	9	-
Idaho	31	22	-	-	101	135	75	72	-	2	4	2
Wyo.	4	6	2	-	49	86	12	12	49	-	1	5
Colo.	354	108	9	1	3,792	2,962	689	97	84	23	17	-
N. Mex.	97	47	4	1	818	899	272	176	27	8	2	2
Ariz.	333	98	6	1	3,730	3,934	1,002	145	24	14	26	-
Utah	109	16	3	1	285	278	323	17	27	7	2	6
Nev.	194	42	2	-	1,743	2,261	92	88	14	-	21	1
PACIFIC	8,138	2,884	94	4	37,935	46,777	5,378	2,985	1,283	210	78	193
Wash.	458	-	1	-	3,268	4,243	696	304	139	8	13	13
Oreg.	257	-	-	-	1,433	1,753	404	237	66	9	1	-
Calif.	7,289	2,759	86	3	32,186	39,368	4,057	2,410	879	183	63	179
Alaska	13	16	7	-	590	775	67	17	4	1	-	-
Hawaii	121	89	-	1	458	638	154	17	195	9	1	1
Guam	-	2	-	-	50	27	5	1	-	6	-	1
P.R.	1,478	151	1	-	192	484	38	361	182	17	1	-
V.I.	9	-	-	-	90	332	4	7	-	-	-	-
Amer. Samoa	-	-	-	-	46	53	1	1	-	-	-	-
C.N.M.I.	-	-	-	-	67	85	3	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly; last update October 31, 1992.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 7, 1992, and November 9, 1991 (45th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1992	1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	Cum. 1992	1992	Cum. 1992	1992	Cum. 1992	Cum. 1991	1992	Cum. 1992	Cum. 1991
UNITED STATES	864	1	2,028	2	120	9,088	1,855	58	2,166	71	2,388	2,334	2	150	1,308
NEW ENGLAND	43	-	58	-	13	86	115	-	16	3	206	262	-	6	4
Maine	1	-	-	-	4	7	9	-	-	-	11	54	-	1	-
N.H.	3	-	15	-	-	-	5	-	3	-	48	18	-	-	1
Vt.	-	-	-	-	-	5	7	-	1	-	8	4	-	-	-
Mass.	22	-	16	-	5	39	44	-	3	3	99	160	-	-	2
R.I.	5	-	23	-	-	4	12	-	1	-	3	-	-	4	-
Conn.	12	-	2	-	4	31	38	-	8	-	37	26	-	1	1
MID. ATLANTIC	239	-	180	-	15	4,673	233	8	162	8	226	227	-	17	566
Upstate N.Y.	38	-	81	-	5	401	104	3	68	4	99	123	-	11	539
N.Y. City	128	-	42	-	8	1,775	23	-	12	-	9	27	-	-	2
N.J.	45	-	52	-	1	1,034	39	-	11	-	31	15	-	3	2
Pa.	28	-	5	-	1	1,463	67	5	71	4	87	62	-	3	23
E.N. CENTRAL	54	-	40	-	14	96	295	8	292	8	392	391	-	8	321
Ohio	11	-	-	-	6	11	70	8	107	4	103	93	-	-	283
Ind.	12	-	20	-	-	6	49	-	10	-	39	74	-	-	3
Ill.	15	-	9	-	4	27	78	-	89	-	32	70	-	8	9
Mich.	13	-	11	-	2	43	79	-	71	2	11	37	-	-	25
Wis.	3	-	-	-	2	9	19	-	15	-	207	117	-	-	1
W.N. CENTRAL	37	-	8	-	8	59	89	1	73	5	203	194	-	8	19
Minn.	16	-	7	-	5	27	17	-	24	-	32	77	-	-	6
Iowa	3	-	-	-	3	17	9	1	12	2	9	23	-	3	6
Mo.	11	-	-	-	-	1	28	-	29	3	98	68	-	1	5
N. Dak.	1	-	-	-	-	-	1	-	2	-	14	4	-	-	1
S. Dak.	1	-	-	-	-	-	1	-	-	-	14	4	-	-	-
Nebr.	1	-	-	-	-	1	17	-	4	-	13	9	-	-	-
Kans.	4	-	1	-	-	13	16	-	2	-	23	11	-	4	1
S. ATLANTIC	185	-	122	1	13	540	344	21	768	12	161	227	1	22	10
Del.	5	-	1	-	-	21	2	-	8	-	7	-	-	-	-
Md.	58	-	10	-	7	176	35	1	71	-	30	50	-	6	1
D.C.	13	-	-	-	-	-	3	-	5	-	1	1	-	1	1
Va.	40	-	11	1[†]	5	30	53	3	52	5	15	24	-	-	-
W. Va.	2	-	-	-	-	-	16	-	28	-	9	9	-	1	-
N.C.	12	-	24	-	-	44	76	16	208	7	43	38	-	-	2
S.C.	1	-	29	-	-	13	22	-	51	-	10	14	-	7	-
Ga.	13	-	2	-	1	15	52	-	70	-	14	48	-	-	-
Fla.	43	-	45	-	-	241	85	1	277	-	32	45	1	7	6
E.S. CENTRAL	17	-	448	-	16	28	119	-	57	-	30	86	-	1	100
Ky.	1	-	447	-	2	23	39	-	-	-	1	-	-	-	-
Tenn.	11	-	-	-	-	3	33	-	15	-	8	36	-	1	100
Ala.	4	-	-	-	-	2	36	-	13	-	18	48	-	-	-
Miss.	1	-	1	-	16	-	11	-	29	-	3	4	-	-	-
W.S. CENTRAL	30	-	1,049	-	5	190	140	12	366	6	115	136	-	-	7
Ark.	3	-	-	-	-	5	17	-	9	-	18	12	-	-	1
La.	1	-	-	-	-	-	27	-	22	1	10	16	-	-	-
Okla.	5	-	11	-	-	-	14	-	17	5	33	39	-	-	-
Tex.	21	-	1,038	-	5	194	82	12	320	-	54	71	-	-	6
MOUNTAIN	29	-	25	-	7	1,255	85	2	136	23	373	307	-	9	30
Mont.	-	-	-	-	-	-	15	-	2	2	9	4	-	-	3
Idaho	1	-	-	-	-	450	8	-	3	-	38	27	-	1	-
Wyo.	-	-	1	-	-	3	2	-	1	-	-	3	-	-	-
Colo.	8	-	21	-	6	7	17	1	23	11	68	129	-	2	3
N. Mex.	5	-	1	-	1	98	8	N	N	2	99	43	-	-	4
Ariz.	9	-	2	-	-	454	19	-	72	7	121	62	-	2	2
Utah	4	-	-	-	-	224	4	1	23	1	36	37	-	2	11
Nev.	2	-	-	-	-	19	12	-	12	-	2	2	-	2	7
PACIFIC	230	1	100	1	27	2,152	435	4	294	8	882	500	1	79	251
Wash.	16	-	-	-	11	61	70	-	12	2	194	131	-	8	8
Oreg.	13	-	3	-	1	91	62	N	N	-	40	64	-	3	3
Calif.	188	1	55	-	3	1,965	289	4	257	6	412	232	1	45	229
Alaska	1	-	8	-	1	5	8	-	3	-	14	13	-	-	1
Hawaii	12	-	34	1[†]	11	30	6	-	22	-	22	60	-	23	10
Guam	2	-	10	-	-	-	1	-	11	-	-	-	-	3	-
P.R.	-	-	411	-	-	94	3	-	1	-	11	54	-	-	1
V.I.	-	-	-	-	-	2	-	-	20	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	24	-	-	-	-	6	-	-	-	-
C.N.M.I.	-	-	1	-	1	-	-	-	-	-	1	-	-	-	-

*For measles only, imported cases include both out-of-state and international importations.
N: Not notifiable U: Unavailable [†] International [§] Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending November 7, 1992, and November 9, 1991 (45th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-Shock Syndrome	Tuberculosis		Tularemia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1991	Cum. 1992	Cum. 1992	Cum. 1992	Cum. 1992
UNITED STATES	29,072	36,271	201	19,203	19,730	146	337	423	6,670
NEW ENGLAND	609	898	14	457	572	1	27	7	760
Maine	2	3	1	19	33	-	-	-	-
N.H.	70	12	6	16	5	-	1	-	9
Vt.	1	2	-	6	9	-	-	-	22
Mass.	290	430	5	252	308	1	17	3	28
R.I.	35	45	2	42	75	-	-	2	-
Conn.	211	406	-	122	142	-	9	2	701
MID. ATLANTIC	3,781	6,224	25	4,116	4,585	1	91	45	1,834
Upstate N.Y.	283	563	10	364	375	-	14	15	1,239
N.Y. City	2,256	3,176	-	2,673	2,838	-	38	8	16
N.J.	116	1,056	-	494	763	1	25	13	290
Pa.	1,126	1,427	15	585	609	-	14	11	289
E.N. CENTRAL	4,420	4,328	48	1,953	1,966	1	38	28	148
Ohio	705	589	15	284	314	-	6	16	13
Ind.	242	163	5	169	200	-	1	4	19
Ill.	2,051	2,018	8	1,015	1,016	1	25	2	38
Mich.	831	1,030	20	416	351	-	3	3	15
Wis.	591	548	-	69	85	-	1	3	61
W.N. CENTRAL	1,297	779	37	444	453	53	6	31	973
Minn.	85	60	7	123	87	-	2	-	150
Iowa	44	63	7	34	55	-	1	3	162
Mo.	1,005	474	8	195	205	38	2	22	29
N. Dak.	1	1	3	6	8	-	-	-	140
S. Dak.	-	1	-	21	30	11	-	1	122
Nebr.	1	15	4	20	18	2	1	-	12
Kans.	161	165	8	45	50	2	-	5	358
S. ATLANTIC	7,934	10,855	21	3,678	3,740	5	32	132	1,578
Del.	185	150	3	42	30	-	-	14	184
Md.	553	856	2	334	347	1	7	16	463
D.C.	336	634	-	94	162	-	1	1	16
Va.	634	798	3	304	288	2	2	21	317
W. Va.	19	26	1	81	61	-	1	5	42
N.C.	2,141	1,743	3	468	477	1	-	57	44
S.C.	1,060	1,358	1	346	388	-	2	8	152
Ga.	1,548	2,621	4	765	745	1	2	7	317
Fla.	1,458	2,469	4	1,244	1,262	-	17	3	43
E.S. CENTRAL	3,762	3,955	3	1,190	1,341	9	5	61	174
Ky.	150	94	-	348	304	2	1	6	59
Tenn.	1,067	1,295	3	287	439	7	-	52	41
Ala.	1,275	1,469	-	352	332	-	1	3	73
Miss.	1,270	1,097	-	205	266	-	3	-	1
W.S. CENTRAL	5,399	6,548	4	2,379	2,349	42	15	102	844
Ark.	728	581	1	188	200	29	1	20	40
La.	2,261	2,421	-	162	175	2	1	-	6
Okla.	370	179	2	133	153	11	-	81	283
Tex.	2,040	3,367	1	1,896	1,821	-	13	1	313
MOUNTAIN	302	506	16	490	532	28	5	11	232
Mont.	7	6	1	-	6	12	-	3	22
Idaho	1	4	1	21	9	-	1	1	7
Wyo.	5	8	1	-	5	1	-	4	81
Colo.	50	80	6	52	70	4	2	-	24
N. Mex.	39	28	1	72	63	6	1	1	9
Ariz.	152	320	2	220	278	-	-	-	66
Utah	7	6	4	61	40	2	-	1	6
Nev.	41	54	-	64	61	3	1	1	17
PACIFIC	1,568	2,378	33	4,496	4,192	6	120	6	329
Wash.	71	169	3	270	265	2	8	-	-
Oreg.	41	80	1	115	108	-	2	3	2
Calif.	1,443	2,118	29	3,838	3,584	2	103	3	314
Alaska	5	4	-	43	57	2	-	-	13
Hawaii	8	7	-	230	178	-	7	-	-
Guam	3	1	-	58	8	-	3	-	-
P.R.	290	378	-	200	203	-	1	-	41
V.I.	62	91	-	3	3	-	-	-	-
Amer. Samoa	-	-	-	-	3	-	1	-	-
C.N.M.I.	6	5	-	50	18	-	1	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending November 7, 1992 (45th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	596	431	93	35	20	17	39
Boston, Mass.	134	86	26	10	1	11	13
Bridgeport, Conn.	34	28	4	2	-	-	4
Cambridge, Mass.	31	25	4	1	1	-	4
Fall River, Mass.	27	23	3	1	-	-	-
Hartford, Conn.	59	35	10	3	11	-	-
Lowell, Mass.	24	18	3	3	-	-	-
Lynn, Mass.	9	5	2	1	1	-	-
New Bedford, Mass.	33	26	4	1	2	-	1
New Haven, Conn.	51	37	9	3	1	1	2
Providence, R.I.	43	34	6	2	1	-	-
Somerville, Mass.	4	1	2	1	-	-	-
Springfield, Mass.	46	33	8	2	1	2	3
Waterbury, Conn.	35	31	3	1	-	-	3
Worcester, Mass.	66	49	9	4	1	3	9
MID. ATLANTIC	2,580	1,884	470	304	59	52	119
Albany, N.Y.	58	43	10	1	-	4	2
Allentown, Pa.	24	21	2	1	-	-	-
Buffalo, N.Y.	100	72	19	5	3	1	3
Camden, N.J.	36	21	10	5	-	-	1
Elizabeth, N.J.	16	10	2	3	-	1	1
Erie, Pa.§	44	37	4	1	-	2	4
Jersey City, N.J.	49	31	7	9	1	1	-
New York City, N.Y.	1,320	834	238	192	30	26	47
Newark, N.J.	76	28	21	19	4	4	4
Paterson, N.J.	33	22	8	2	1	-	1
Philadelphia, Pa.	416	273	85	38	13	6	22
Pittsburgh, Pa.§	76	55	11	7	1	2	4
Reading, Pa.	24	16	6	2	-	-	3
Rochester, N.Y.	130	93	19	10	4	4	15
Schenectady, N.Y.	27	25	2	-	-	-	-
Scranton, Pa.§	24	17	5	2	-	-	1
Syracuse, N.Y.	82	60	17	2	2	1	7
Trenton, N.J.	25	19	3	3	-	-	2
Utica, N.Y.	20	17	1	2	-	-	2
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,211	1,365	419	230	137	57	124
Akron, Ohio	49	38	7	3	-	1	-
Canton, Ohio	37	30	6	1	-	-	4
Chicago, Ill.	549	216	108	115	99	11	25
Cincinnati, Ohio	136	96	27	8	2	3	13
Cleveland, Ohio	166	109	32	10	4	11	4
Columbus, Ohio	227	160	36	14	9	8	6
Dayton, Ohio	120	87	24	6	2	1	7
Detroit, Mich.	241	148	50	22	5	13	8
Evansville, Ind.	45	33	10	2	-	-	1
Fort Wayne, Ind.	63	47	10	5	1	-	6
Gary, Ind.	20	9	5	3	2	1	1
Grand Rapids, Mich.	68	42	15	4	3	4	5
Indianapolis, Ind.	190	132	33	19	5	1	22
Madison, Wis.	59	40	14	4	1	-	1
Milwaukee, Wis.	124	94	25	5	-	-	8
Peoria, Ill.	51	32	12	4	2	1	8
Rockford, Ill.	43	33	4	4	1	1	4
South Bend, Ind.	23	19	1	1	1	1	1
Toledo, Ohio	U	U	U	U	U	U	U
Youngstown, Ohio	U	U	U	U	U	U	U
W.N. CENTRAL	733	505	130	51	31	16	43
Des Moines, Iowa	66	48	12	4	1	3	9
Duluth, Minn.	31	20	8	1	1	1	3
Kansas City, Kans.	24	16	4	-	3	1	-
Kansas City, Mo.	123	81	20	10	11	1	9
Lincoln, Nebr.	29	23	3	2	1	-	2
Minneapolis, Minn.	165	122	22	13	5	3	14
Omaha, Nebr.	77	48	20	5	3	1	4
St. Louis, Mo.	119	75	26	9	4	5	-
St. Paul, Minn.	58	44	7	5	1	1	2
Wichita, Kans.	41	30	8	2	1	-	-

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,172	709	218	154	44	45	53
Atlanta, Ga.	166	93	36	21	8	6	4
Baltimore, Md.	179	103	38	25	8	5	16
Charlotte, N.C.	75	50	11	6	5	3	7
Jacksonville, Fla.	89	57	12	13	4	2	2
Miami, Fla.	79	37	20	17	3	2	-
Norfolk, Va.	72	41	10	11	4	6	5
Richmond, Va.	68	45	7	10	2	4	3
Savannah, Ga.	62	41	13	6	2	-	5
St. Petersburg, Fla.	50	38	4	2	-	6	2
Tampa, Fla.	160	111	29	15	1	3	5
Washington, D.C.	157	81	33	28	7	8	4
Wilmington, Del.	15	12	3	-	-	-	-
E.S. CENTRAL	785	486	164	76	31	28	49
Birmingham, Ala.	132	79	26	12	11	4	7
Chattanooga, Tenn.	63	36	24	1	2	-	5
Knoxville, Tenn.	64	43	15	4	1	1	6
Lexington, Ky.	68	42	16	6	3	1	5
Memphis, Tenn.	220	137	36	25	8	14	15
Mobile, Ala.	53	28	10	11	1	3	1
Montgomery, Ala.	48	29	10	7	-	2	1
Nashville, Tenn.	137	92	27	10	5	3	9
W.S. CENTRAL	1,324	824	248	154	54	41	81
Austin, Tex.	63	35	11	11	1	5	4
Baton Rouge, La.	35	23	8	3	1	-	1
Corpus Christi, Tex.	U	U	U	U	U	U	U
Dallas, Tex.	246	145	58	29	8	6	6
El Paso, Tex.	63	43	10	6	3	1	2
Ft. Worth, Tex.	76	45	9	15	2	5	1
Houston, Tex.	376	211	73	57	21	13	29
Little Rock, Ark.	56	43	7	3	1	2	2
New Orleans, La.	96	60	17	4	9	4	-
San Antonio, Tex.	175	117	39	12	3	4	7
Shreveport, La.	29	22	4	-	2	1	6
Tulsa, Okla.	109	80	12	14	3	-	3
MOUNTAIN	740	467	159	67	24	23	51
Albuquerque, N.M.	89	48	20	14	5	2	3
Colo. Springs, Colo.	40	26	7	4	1	2	6
Denver, Colo.	98	48	19	14	6	1	6
Las Vegas, Nev.	124	69	24	8	1	2	6
Ogden, Utah	26	17	4	3	2	-	3
Phoenix, Ariz.	168	105	37	9	7	10	17
Pueblo, Colo.	29	20	6	3	-	-	1
Salt Lake City, Utah	95	58	22	9	1	5	6
Tucson, Ariz.	81	56	20	3	1	1	3
PACIFIC	1,858	1,213	344	181	57	58	98
Berkeley, Calif.	10	7	3	-	-	-	-
Fresno, Calif.	88	64	11	7	2	4	7
Glendale, Calif.	23	17	5	1	-	-	2
Honolulu, Hawaii	56	35	12	8	-	1	6
Long Beach, Calif.	77	49	13	9	4	2	6
Los Angeles, Calif.	530	307	118	69	20	10	21
Pasadena, Calif.	31	25	1	1	2	2	-
Portland, Oreg.	126	84	28	-	10	4	4
Sacramento, Calif.	151	111	16	13	3	8	13
San Diego, Calif.	143	79	31	20	4	8	10
San Francisco, Calif.	144	87	22	26	3	6	-
San Jose, Calif.	141	91	34	10	3	3	18
Santa Cruz, Calif.	30	23	6	1	-	-	2
Seattle, Wash.	184	124	22	10	3	5	6
Spokane, Wash.	52	41	8	2	-	1	-
Tacoma, Wash.	92	69	14	4	3	2	3
TOTAL	11,999¶	7,694	2,245	1,252	457	335	637

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.
†Pneumonia and influenza.
§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.
¶Total includes unknown ages.
U: Unavailable.

Southeast Asian Immigrants — Continued

3. Poss JE. Hepatitis B virus infection in Southeast Asian children. Journal of Pediatric Health Care 1989;3:311–5.
4. Swerdlow AJ. Mortality and cancer incidence in Vietnamese refugees in England and Wales: a follow-up study. Int J Epidemiol 1991;20:13–9.
5. Bates SR, Hill L, Barrett-Connor E. Cardiovascular disease risk factors in an Indochinese population. Am J Prev Med 1989;5:15–20.
6. Jenkins CNH, McPhee SJ, Bird JA, Bonilla NTH. Cancer risks and prevention behaviors among Vietnamese refugees. West J Med 1990;153:34–9.
7. CDC. Cigarette smoking among Chinese, Vietnamese, and Hispanics—California, 1989–1991. MMWR 1992;41:362–7.
8. Anda RF, Waller MN, Wooten KG, et al. Behavioral risk factor surveillance, 1988. MMWR 1990;39(no. SS-2):1–21.
9. CDC. Reducing the health consequences of smoking: 25 years of progress—a report of the Surgeon General. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, 1989; DHHS publication no. (CDC)89-8411.

Cigarette Smoking Among American Indians and Alaskan Natives — Behavioral Risk Factor Surveillance System, 1987–1991

Cardiovascular disease and cancer are two of the leading causes of premature death among American Indians and Alaskan Natives (*1*). Although cigarette smoking contributes to these diseases, cigarette smoking behaviors among American Indians and Alaskan Natives have not been well characterized nationally (*2,3*). To better assess the impact of smoking on these populations, CDC analyzed data obtained from the Behavioral Risk Factor Surveillance System (BRFSS) during 1987–1991. This report summarizes the findings from this study.

Data were analyzed for 3102 American Indians and Alaskan Natives and for 297,438 white persons aged ≥18 years from 47 states and the District of Columbia. Data were from the BRFSS, a telephone interview survey that uses a standardized, multistage, cluster sampling design. Data were weighted to provide estimates representative of each state. Current smokers were defined as persons who reported current smoking and who had smoked at least 100 cigarettes. Survey participants were asked the average number of cigarettes smoked per day. SESUDAAN (*4*) was used to calculate prevalence estimates, standard errors, and confidence intervals (*5*).

During 1987–1991, the prevalence of smoking was higher among American Indian and Alaskan Native men (33.4%) and women (26.6%) than among white men (25.7%) and women (23.0%). Although the prevalence of smoking declined with increasing education and income for white men, among American Indian and Alaskan Native men with a college education or more, the rate of smoking was substantially higher (37.5%) than for whites (14.6%) (Table 1).

The average number of cigarettes smoked per day among smokers was lower for American Indian and Alaskan Native men (19.4) and women (15.5) than for white men (21.4) and women (17.7)—a relation that was consistent across age, education, and income categories (Table 2).

Reported by: Epidemiology Br, Office on Smoking and Health, and Behavioral Risk Factor Surveillance Br, Office of Surveillance and Analysis, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The higher prevalence of smoking among American Indians and Alaskan Natives described in this report is consistent with findings from other national surveys (*6,7*). However, because many American Indians and Alaskan Natives in rural areas do not have telephones (*8*), this telephone survey may overrepresent urban respondents.

American Indians and Alaskan Natives — Continued

Explanations for the higher smoking prevalence among American Indians and Alaskan Natives may include lower educational attainment, lower income levels, traditional cultural practices involving tobacco use, and concurrent alcohol use (*2,9*). Culturally sensitive and empirically tested prevention and cessation efforts may be necessary to adequately address tobacco use in these populations.

The year 2000 national health objectives have targeted a smoking prevalence of 20% or less among American Indians and Alaskan Natives (objective 3.4f) (15% among the total population [objective 3.4]) (*10*). To achieve this objective, smoking-cessation and smoking-prevention efforts must be targeted and intensified for these groups.

References

1. Indian Health Service. Trends in Indian health, 1990. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, 1990.
2. US Department of Health and Human Services. Report of the Secretary's Task Force on Black and Minority Health. Vol 1: executive summary. Washington, DC: US Department of Health and Human Services, 1987; DHHS publication no. 86-621-604.
3. CDC. Reducing the health consequences of smoking: 25 years of progress—a report of the Surgeon General. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, 1989; DHHS publication no. (CDC)89-8411.
4. Shah BV. SESUDAAN: standard errors program for computing of standardized rates from sample survey data. Research Triangle Park, North Carolina: Research Triangle Institute, 1981.

TABLE 1. Prevalence of cigarette smoking among American Indian, Alaskan Native, and white adults,* by sex, age, education, and income — United States, Behavioral Risk Factor Surveillance System, 1987–1991†

	American Indian and Alaskan Native				White			
	Men		Women		Men		Women	
Category	%	(95% CI§)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Age (yrs)								
18–24	21.2	(12.2–30.2)	28.0	(17.1–38.8)	23.7	(22.6–24.9)	23.7	(22.7–24.7)
25–44	39.7	(33.3–46.2)	27.0	(21.8–32.1)	29.7	(29.1–30.3)	26.7	(26.2–27.2)
45–54	39.0	(25.9–52.1)	36.8	(24.0–49.6)	29.2	(28.1–30.3)	27.3	(26.3–28.3)
≥55	28.2	(18.1–38.3)	14.3	(8.4–20.3)	18.4	(17.8–19.0)	16.4	(15.9–16.9)
Education								
Less than high school diploma	40.5	(31.3–49.7)	29.3	(20.6–37.9)	34.1	(33.0–35.2)	26.4	(25.5–27.2)
High school diploma	30.8	(23.6–38.1)	27.2	(20.8–33.7)	32.2	(31.5–33.0)	27.1	(26.6–27.7)
Some college	28.4	(20.9–36.0)	26.6	(19.0–34.1)	24.3	(23.6–25.0)	22.8	(22.2–23.4)
Undergraduate degree or higher	37.5	(19.7–55.3)	20.4	(6.7–34.1)	14.6	(14.0–15.1)	13.2	(12.7–13.8)
Annual income								
<$10,000	42.5	(29.8–55.2)	28.5	(21.7–35.3)	29.5	(28.1–31.0)	24.7	(23.9–25.6)
$10,000–$14,999	42.8	(31.4–54.2)	30.9	(19.0–42.9)	29.6	(28.3–31.0)	26.6	(25.6–27.6)
$15,000–$19,999	27.0	(16.5–37.5)	27.4	(16.4–38.4)	29.7	(28.4–31.0)	27.8	(26.7–28.9)
$20,000–$24,999	32.5	(19.6–45.4)	19.6	(11.0–28.2)	30.5	(29.3–31.8)	26.2	(25.2–27.3)
$25,000–$34,999	27.0	(16.1–38.0)	26.6	(14.4–38.9)	27.1	(26.2–28.0)	25.3	(24.4–26.1)
≥$35,000	31.0	(21.2–40.8)	23.4	(11.8–35.0)	22.1	(21.4–22.7)	19.6	(19.0–20.2)
Total	**33.4**	**(28.8–37.9)**	**26.6**	**(22.4–30.8)**	**25.7**	**(25.3–26.0)**	**23.0**	**(22.7–23.3)**

*Persons aged ≥18 years who reported having smoked at least 100 cigarettes and who were currently smoking.
†Aggregated, weighted data.
§Confidence interval.

American Indians and Alaskan Natives — Continued

5. Remington PL, Smith MY, Williamson DF, Anda RF, Gentry EM, Hogelin GC. Design, characteristics, and usefulness of state-based behavioral risk factor surveillance: 1981–1987. Public Health Rep 1988;103:366–75.
6. Lefkowitz D, Underwood C. Personal health practices: findings from the Survey of American Indians and Alaska Natives. Rockville, Maryland: Public Health Service, Agency for Health Care Policy and Research, 1991; AHCPR publication no. (PHS)91-0034. [National Medical Expenditure Survey research findings no.10].
7. CDC. Cigarette smoking among adults—United States, 1990. MMWR 1992;41:354–5,361–2.
8. Sugarman JR, Warren CW, Oge L, Helgerson SD. Using the Behavioral Risk Factor Surveillance System to monitor year 2000 objectives among American Indians. Public Health Rep 1992;107:449–56.
9. Schinke SP, Moncher MS, Holden GW, Botvin GJ, Orlandi MA. American Indian youth and substance abuse: tobacco use problems, risk factors and preventive interventions. Health Educ Res 1989;4:137–44.
10. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.

TABLE 2. Mean number of cigarettes smoked daily by current smokers among American Indian, Alaskan Native, and white adults,* by sex, age, education, and income — United States, Behavioral Risk Factor Surveillance System, 1987–1991†

	American Indian and Alaskan Native				White			
	Men		Women		Men		Women	
Category	No.	(95% CI§)	No.	(95% CI)	No.	(95% CI)	No.	(95% CI)
Age (yrs)								
18–24	16.6	(12.8–20.3)	14.7	(10.9–18.4)	16.1	(15.6–16.5)	14.6	(14.2–15.0)
25–44	20.1	(17.2–23.1)	15.8	(14.0–17.6)	21.5	(21.2–21.7)	17.9	(17.7–18.2)
45–54	20.9	(14.6–27.3)	14.9	(11.7–18.2)	24.9	(24.3–25.4)	20.0	(19.6–20.5)
≥55	18.0	(11.9–24.1)	18.0	(11.2–24.8)	22.2	(21.7–22.7)	17.6	(17.2–17.9)
Education								
Less than high school diploma	23.7	(19.8–27.7)	15.1	(12.4–17.9)	22.4	(21.9–22.9)	19.3	(18.9–19.7)
High school diploma	17.7	(14.3–21.0)	14.8	(12.8–16.7)	21.6	(21.3–21.9)	17.8	(17.6–18.1)
Some college	18.8	(14.7–22.8)	17.9	(14.6–21.2)	20.9	(20.5–21.3)	17.1	(16.8–17.4)
Undergraduate degree or higher	12.9	(7.1–18.7)	12.2	(8.4–16.1)	20.2	(19.7–20.7)	16.4	(15.9–16.8)
Annual income								
<$10,000	18.2	(15.1–21.3)	18.0	(15.0–21.1)	19.9	(19.2–20.6)	18.1	(17.7–18.5)
$10,000–$14,999	16.9	(11.8–22.0)	14.6	(10.4–18.8)	20.1	(19.4–20.7)	17.7	(17.2–18.1)
$15,000–$19,999	14.2	(9.9–18.4)	13.3	(10.8–15.8)	21.4	(20.8–22.0)	18.2	(17.7–18.7)
$20,000–$24,999	21.8	(15.6–28.1)	12.2	(9.2–15.1)	21.6	(21.0–22.2)	17.7	(17.2–18.1)
$25,000–$34,999	22.9	(15.5–30.3)	16.7	(14.1–19.2)	22.0	(21.5–22.4)	17.6	(17.3–18.0)
≥$35,000	19.6	(13.6–25.5)	16.3	(11.2–21.4)	21.9	(21.5–22.3)	17.7	(17.4–18.1)
Total	**19.4**	**(17.2–21.6)**	**15.5**	**(13.9–17.1)**	**21.4**	**(21.2–21.6)**	**17.7**	**(17.6–17.9)**

*Persons aged ≥18 years who reported having smoked at least 100 cigarettes and who were currently smoking. These data include only persons who reported smoking one or more cigarettes per day.
†Aggregated, weighted data.
§Confidence interval.

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Director, Centers for Disease Control and Prevention
William L. Roper, M.D., M.P.H.
Deputy Director, Centers for Disease Control and Prevention
Walter R. Dowdle, Ph.D.
Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.

Editor, *MMWR* Series
Richard A. Goodman, M.D., M.P.H.
Managing Editor, *MMWR* (weekly)
Karen L. Foster, M.A.
Writers-Editors, *MMWR* (weekly)
David C. Johnson
Barbara J. Reynolds
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